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MAKING HEALTH A HOUSEHOLD WORD

by MICHELLE HIBLER

Winding along the road from the realtive coolness of Guatemala city to the hot, humid Pacific lowlands, Dr Fernando Viteri, Chief of the Human Biology and Nutrition Division in the Institute of Nutrition for Central America and Panama (INCAP), explains a basic fact of rural life in Guatemala: "Just as children may have their own dog, their own cat, they may also have their own shigella, their own salmonella."

Studies have shown, in fact, that 96 percent of rural people in Guatemala harbour one or more species of parasitic worms or protozoa, or both.

This continuous contamination of the gastrointestinal tract is a major health problem in Guatemala, as it is in many other developing countries. And a major agent in this contamination is the home environment itself.

Living conditions in rural areas are precarious in more than economic terms: water supplies and sanitary facilities are inadequate, and sanitation practices are poor or nonexistent. These favour the perpetuation of a highly contaminated environment, reflected in the persistence of intestinal parasitism and chronic intestinal infections. Dr Viteri puts it more simply: "In a highly contaminated home, people have contaminated guts."

Starting from the hypothesis that the home was an extensively contaminated environment, and that mothers played a key role as "spreading agents" of

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contamination, INCAP researchers with support from the International Development Research Centre of Canada, began a project in 1977 to evaluate and pinpoint within-the-home contamination, the magnitude of the problem, and to design a sanitary education program to combat it.

The first phase of the study aimed at developing and standardizing methods to measure the contamination of the home environment and to measure changes that occurred in the ecology of the gastrointestinal tract of the population. Through extensive surveys it was found, for example, that 92 percent of family members do not wash their hands after defecating, and the same percentage of mothers do not wash after changing the baby's soiled diapers. Older children who assist mothers in caring for their siblings also lack proper hygienic practices. The use of latrines — even by people who have them — is not common.

Most villagers obtain their water from wells that are usually left uncovered, inviting pollution. The tin cans used for drawing water are frequently left lying on the ground. Inside the home, water is stored in open containers, often on the floor in reach of the animals. Tests showed a high degree of water contamination.

To determine the presence of bacteria and parasites in the intestines of the villagers and to measure the degree of food malabsorption, simple tests were developed. All that is basically required is to measure the amount of hydrogen in the breath. Healthy individuals rapidly absorb carbohydrates. Only a small part of these substances is not absorbed and reaches the colon where bacterial metabolism takes place, producing hydrogen. The gas permeates the intestinal walls and reaches the lungs where it is exhaled. Elevated concentrations of hydrogen in the breath thus mean either under-absorption of carbohydrates, or increased bacterial overgrowth in the small intestines.

But because this test cannot distinguish between food malabsorption and bacterial overgrowth, another test standardized at INCAP is used to determine the cause of hydrogen production. Although these tests are not developed to the stage where they are fully accurate predictions, preliminary results are promising.

In order to evaluate the problems associated with diarrhea, it was important to understand the local beliefs about the disease. Most rural Guatemalans do not in fact consider diarrhea to be a disease, but rather a symptom of a wide range of disorders. "They are still in the pre-Pasteurian age", says Dr Viteri. "They don't recognize the existence of bacteria."

From the information gathered it was possible to design a sanitary education program aimed at breaking the cycle of contamination, using concepts that are in accord with traditional beliefs.

The education program is now being implemented in an experimental community, Florida Aceituno. The community's reception to the study was unanimous and enthusiastic.

To ensure the program's acceptance and continuation, the support and participation of the villagers had to be assured. Community leaders have therefore been involved from the beginning to act as agents of change and health educators. Traditional healers and midwives are also called on to participate, and women from the village have been selected to act as rural health volunteers.

The production and evaluation of the educational materials began early this past summer. Five main topics will be dealt with: water handling, child care, pregnancy and lactation, food handling, and the home environment.

The materials are also being developed with the community's collaboration and have gained wide acceptance. So much so in fact that in some houses pictures from the brochure on the use of water have been pasted on the walls for the children to follow. The main character in the brochure on building latrines is so true to life that a real counterpart, of the same name and strong physical resemblance, was found in the village. He also built himself a latrine.

The materials and the program are centred on the mother because of her central role in the home and as an agent in the cycle of contamination. Women's

groups are being organized to give them an opportunity to discuss their problems and needs freely, and to provide them with a supportive environment for their action. But because of the dominant place of men in Guatemala's rural society, their assistance and support has also been enlisted. Through community organizations they are being called on to build latrines, install curbstones around wells, build well covers, etc. In fact, these groups have a direct role in program planning, and the INCAP team, which includes two health educators, assists, advises, and facilitates activities in response to the community's needs.

The team members have been rigorously trained in community work. According to Dr Viteri, they are crucial to the program "because if they don't do the job right, they can ruin the whole project. We're walking on egg-shells," he says. "This type of study demands a lot from a community. Every week someone comes around and asks the same questions. It might be fun for the first weeks, but not after 52 weeks."

He also makes it clear that "we never fool people." The community has been told that it is a study, that the information is confidential, and that they may not get anything out of it. "We don't offer anything that we cannot bring to fruition", he says.

During the course of this year it is hoped that a correlation will be shown between the education program and home contamination, attested to by the hydrogen count. And although the program may well bring real benefits to the villagers, it may also illustrate the validity of the tests that have been developed. If so, simple, effective methods that can be applied to many people will have been perfected, contributing substantially to the evaluation of health-oriented actions everywhere.

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